

ABSTRACT OF THE DISCLOSURE

The present invention is directed to a road condition estimation apparatus for estimating a road condition for use in a vehicle having steering control unit for actuating a device mechanically independent of a manually operated steering member to steer each wheel. The apparatus includes a reaction torque detection unit for detecting reaction torque for detecting a reaction torque when at least a wheel of the vehicle is steered by the steering control unit, an aligning torque estimation unit for estimating an aligning torque produced on the wheel on the basis of the reaction torque detected by the reaction torque detection unit, a wheel factor providing unit for providing at least one of wheel factors including a side force and a slip angle applied to the wheel, and a grip factor estimation unit for estimating a grip factor of at least a tire of the wheel, in accordance with a relationship between the aligning torque estimated by the aligning torque estimation unit and the wheel factor estimated by the wheel factor providing unit.